

FINAL REGION 5 EMERGENCY RESPONSE PROGRAM FISCAL YEAR 2018 ACCOMPLISHMENTS October 4, 2018

EXECUTIVE SUMMARY

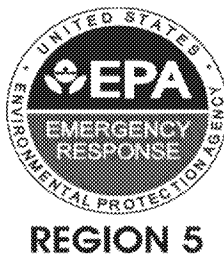
The Region 5 (R5) Emergency Response (ER) Program completed another productive and successful year in 2018.

R5 currently has 36 Level A response ready On-Scene Coordinators (OSCs). The OSCs and other ER Program staff demonstrated a high level of preparedness in the successful completion of a multitude of emergency responses and removal actions involving both hazardous materials and oil. During the fiscal year, OSCs responded to 42 emergency responses, 22 involving hazardous materials and 20 involving oil spills. ER staff completed a total of 44 removal actions: 31 Fund lead and 13 PRP lead. In Fiscal Year (FY) 2018, the ER Program again exceeded our annual goal of 34 removal action completions.

The ER Program participated in multiple events involving coordination with a wide variety of partners across all levels of government. We supported the national deployments to Hurricanes Harvey/Irma/Marie and the California Wildfires, and deployed R5 personnel over 170 times to assist. We continued to protect human health and the environment in residential areas by conducting removal activities at sites such as the Pilsen and USS Lead sites.

The ER Program also continued to maintain a high level of preparedness through the large amount of time and resources dedicated to training and exercise activities. The ER Program continues to coordinate and work closely with the Regional Response Support Corps (RSC), other Regional Divisions/Offices, and EPA special teams. In addition to the efforts and commitment of the entire ER staff, the ER Program is grateful for the support received from senior managers and volunteers from other Divisions and Offices.

The impact of the ER Program, and the hard work and dedication of its employees, was felt across all six Regional States. Several ERB Operational Highlights are showcased in this report. In addition, several representative emergency responses and removal actions are also highlighted.



ERB PROGRAM ACCOMPLISHMENTS

During FY 2017, the ER Program exceeded the Annual Commitment System (ACS) targets of 34 overall removal action completions.

Removal Starts, Completions and EJ Obligations thru October 3, 2018:

Removal Starts:

Fund-lead	30
PRP –lead with Enforcement Instrument	7
PRP-lead Voluntary	<u>6</u>
TOTAL:	43

Removal Completions:

Fund-lead	31
PRP-lead with Enforcement Instrument	5
PRP-lead Voluntary	<u>8</u>
TOTAL:	44

CERCLA Environmental Justice (EJ) Work:

Number of Fund Lead Completions that were EJ Sites:	19
Funding associated with these completions:	\$11,680,561
Percentage of Fund Lead Completions that were EJ Sites:	64%

Number of PRP Lead Completions that were EJ Sites:	4
Funding associated with these completions:	\$192,425
Percentage of PRP Lead Completions that were EJ Sites:	25%

Oil Cleanup Starts	20
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Oil Cleanup Completions	17
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Oil Environmental Justice (EJ) Work:

Number of Fund Lead Completions that were EJ Sites:	2
Funding associated with these completions:	\$220,000
Percentage of Fund Lead Completions that were EJ Sites:	50%

Number of PRP Lead Completions that were EJ Sites:	9
Funding associated with these completions:	\$260,000
Percentage of PRP Lead Completions that were EJ Sites:	100%

ERB OPERATIONAL HIGHLIGHTS

R5 Contribution to 2017-2018 Incidents of National Significance:

The ER Program successfully managed the deployment of 31 R5 OSCs and 76 RSC members to support response actions in four different EPA regions resulting from Hurricanes Harvey/Irma/Maria and the California Wildfires. An additional 20 RSC members assisted in the R5 EOC. All R5 Divisions and Offices provided staff, and multiple staff members deployed or worked in the EOC more than once. The ER Program effectively coordinated with the other EPA Regions on specific personnel needs; identified R5 staff with the appropriate skill sets to meet those needs; provided deploying personnel with the necessary logistical information before, during, and after their deployments; and worked with multiple HQ and R5 units (health and safety, finance, timekeeping and regional counsel) to ensure accurate and appropriate actions were undertaken and documented. In addition, the ER Program registered and trained dozens of new RSC members, and maintained full EOC activation for several months.

Assistance with Michigan Perfluoroalkyl and Polyfluoroalkyl (PFAS) Sites:

The ER Program assisted with three major incidents involving PFAS (PFOA and PFOS) contamination in Michigan. These responses, and the associated strategies, are unique since PFAS is not currently a hazardous substance but is being considered for national listing as such. The Water Division first began focusing on PFAS compounds, but the ER Program and other divisions have become more involved as the States are establishing clean-up levels, conducting responses, and requesting EPA assistance. The ER Program has assisted at the following sites:

- **Wolverine World Wide (Kent County):** EPA is coordinating closely with the State on cooperative and comprehensive studies of the former Rockford tannery and the former House Street dump. EPA is the lead on the CERCLA investigation under a UAO and the State is the lead on the associated PFAS investigation. EPA has also assisted with sampling efforts.
- **Selfridge Air National Guard (ANG) Base (Harrison Township):** The US Coast Guard (USCG) Sector Detroit requested EPA assistance with their response to an aqueous film forming foam (AFFF) spill from a decommissioned fire protection system in their hanger and an associated sewer line that leads to Lake St. Clair. An EPA OSC acted as a technical consultant, advising on mitigation/treatment technologies and end-point determination.
- **Municipal Water Contamination (Parchment):** After elevated PFAS levels were detected in the city's water supply, the State declared a local emergency, provided bottled water to 3,100 residents, and initiated water line remediation/rerouting discussions. EPA offered to assist with sample analysis, organizational structure, expedited permitting, and treatment system design. EPA participated in regular meetings with the State and attended the public meeting in the community.

McLouth Steel Sites (Trenton, Michigan):

The ER Program assisted with settlements on two separate actions at the former McLouth Steel Site, and will be involved in the oversight of the associated remediation activities.

- **McLouth South:** EPA, U.S. Department of Justice, and Michigan Department of Environmental Quality (MDEQ) have negotiated a Settlement Agreement and Covenant Not to Sue with Crown Enterprises, Inc. and MSC Land Co. (MSC), LLC (non-liaible parties). Under the terms of the settlement, MSC will demolish dozens of above ground structures and remove all associated asbestoos and polychlorinated biphenyl (PCB)

contaminated materials and containers; empty, clean and fill twenty three subsurface structures; investigate five possible PCB release areas; and assess options for storm water management to eliminate uncontrolled flow to the Trenton Channel of the Detroit River. To address environmental issues not covered by the settlement, EPA has proposed the southern section of the site for listing on the Superfund National Priorities List.

- **McLouth North:** MDEQ and Riverview-Trenton Railroad Co. (RTRR) have entered a Corrective Action Consent Order (CACO). Under the CACO, RTRR has committed to undertake corrective actions including Phase I investigation and response activities at five known waste management units; investigation of groundwater contamination; dust control, and evaluation of storm water management options to eliminate sheet flow to the Trenton Channel of the Detroit River.

HOMELAND SECURITY

Region 5's Homeland Security program is coordinated between the Office of the Regional Administrator, the Resources Management Division, and the Superfund Emergency Response Branch (ERB). All Region 5 divisions and offices participate in and provide expertise to the Region's Homeland Security workgroup. Our FY18 highlights include:

- Conducted our annual Senior Staff COOP exercise and Regional Incident Command Team (RICT) training; including a Devolution of Operations exercise.
- Provided "Incident Command System for Executives" training to the Region 5 RICT, including our newly appointed Regional Administrator and her staff.
- Updated the biological and radiological quick guides for the RICT.
- Continued coordination for COOP and devolution planning, updated and maintained emergency fly-away kits, and provided input to vital records maintenance and emergency relocation group planning.
- Continued planning to support FEMA with National Disaster Recovery Framework (NDRF) preparedness.
- Supported coordination with FEMA and the State of Minnesota for Superbowl 52 security, response preparedness, and pre-deployment activities.
- Developed a Reconstitution exercise for the RICT (to be completed early in FY19).
- Continued to exercise monthly rapid communication practices with EPA's Mass Notification Alert System (MANS) by using the Everbridge system and associated i-Phone applications. In addition, Region 5 has supported a Headquarters effort to coordinate National alerts to all EPA employees nationwide, including two full notification exercises. Based on results from these exercises, we continue to enhance our use of Everbridge as the means for employees to input and update their emergency contact information.
- Provided input to Headquarters regarding a planned national Homeland Security Coordinators workshop and provided input on several planning and strategic documents.

RESPONSE SUPPORT CORPS (RSC)

The ER Program continued to focus on recruiting and engaging RSC members from all R5 Divisions and Offices.

- R5 currently has 356 RSC members, with 320 of them having completed the basic RSC requirements for deployment (Orientation, ICS 100, and ICS 200).

- Select RSC members participated in the annual R5 Incident Management Team (IMT) Functional Exercise and the Enbridge Des Plaines River Full Scale Exercise in key leadership and support positions.
- R5 supported the Hurricane Harvey/Irma/Maria and California Wildfire responses. A total of 76 RSC members from all R5 Divisions/Offices were deployed to assist at these incidents of national significance. In addition, an additional 20 R5 RSC members supported the deployment efforts by volunteering in the R5 EOC. Dozens of new R5 RSC members were registered and trained.

EXERCISES, TRAINING, and OUTREACH

FY18 again provided ample opportunities for ER Program staff to participate in exercises, training, and deployments.

- ER Program OSCs and Oil staff participated in more than 70 inspections and exercises this year. Highlights include the annual EPA Level A Full Scale and IMT Functional exercises, Enbridge Des Plaines River Full Scale Exercise, Dark Skies Exercise, Manistique Full Scale Exercise, and multiple Facility Response Plan (FRP) and Spill Prevention Control and Countermeasure (SPCCS) inspection exercises.
- Various R5 OSCs attended and instructed a wide variety of training courses this year including the February 2018 OSC Academy and multiple oil spill response courses. In addition, several OSCs assisted with multiple response training sessions developed for and presented to our Tribal partners in R5.
- R5 OSCs continued outreach efforts with our responses partners at the local, State, Federal and Tribal level through meetings and presentations. The ER Program continued working with dozens of area planning committees and local emergency planning commissions. We organized a specific outreach event with the Michigan Department of Environmental Quality responders this year. R5 OSCs continued to engage children in local communities through a variety of outreach events and festivals.

THE OIL PROGRAM

Oil Program FY18 highlights include:

- In July 2018, R5 and USCG District 9 signed an MOU regarding agency participation on area committees to execute the NCP. This MOU replaces the June 1999 MOU.
- 36.55 miles of river systems cleaned up and/or restored.
- 8.5 cubic yards of sediment removed and/or capped.
- 1,930,970 gallons of oil cleaned up on land or in waterways.
- 4.25 acres of soil and sediment cleaned up in floodplains and riverbanks.
- Reviewed 69 FRPs of which 17 were approved.
- Completed 38 FRP 5-year reviews.
- Digitized 55 FRPs.
- Conducted 23 Government Initiated Unannounced Exercises and 23 FRP Inspections.
- Exceeded our goals of 27 SPCC inspections with 60% at high risk facilities by completing 32 SPCC inspections, including 21 (65%) at high risk facilities.
- Continued inspector related classroom and field training for new OSCs and other staff.

Joint Regional Response Team (RRT) Meetings:

- The Fall 2017 meeting was held at the State of Illinois Emergency Operations Center in Springfield, Illinois on October 24-25, 2017. The meeting included an all-agency brief out on the multiple hurricane and wildfire responses that occurred. In addition, a natural disaster tab was created on the rrt5.org website for agencies to share documents related to natural disaster response.
- The Spring 2018 meeting was held at the Kent Conference Center in Grand Rapids, Michigan on April 17-18, 2018. The RRT voted on and approved an USCG/US EPA jurisdictional boundary change for northeast Ohio (Cleveland area), making the language consistent with that previously approved for southeast Michigan (Detroit area).

Enbridge Des Plaines River FSE:

On September 27, 2018, Enbridge conducted a pipeline emergency response training and full scale exercise on the Des Plaines River in Will County, Illinois. Enbridge conducted this event as its second of four exercises required under the May 2017 consent decree resulting from two unlawful Lakehead System pipeline discharges.

Three ER Program staff were heavily involved with exercise development including attending planning meetings, developing injects for exercise play, and assisting Enbridge with identifying additional EPA contacts. EPA FIELDS staff were also brought in during exercise design phase to develop a data management plan and injects. EPA coordinated multiple local, state and federal agencies during the planning phase to ensure that the exercise objectives would be applicable to all area agencies that would be affected by an oil spill incident of this magnitude.

The exercise scenario involved a guillotine break at the Enbridge Line 14 pipeline resulting in 6,863 barrels of light crude released into the Des Plaines River. An incident command post and joint information center were activated and response resources were deployed to two control points on the Des Plaines River to simulate the field response to the spilled oil. Eighteen R5 IMT members participated in the exercise either as players/coaches, controller/evaluators, or in the truth/simulation cell. EPA FIELDS deployed to simulate data collected in the field and to ensure effective data communication to the incident command post. EPA mobilized the mobile command post and sprinter van to increase exercise communications capabilities.

THE CHEMICAL EMERGENCY PREPAREDNESS AND PREVENTION SECTION (CEPPS)

Risk Management Program (RMP)

In FY18, CEPPS completed 32 inspections at facilities required to submit Risk Management Plans under CAA 112(r). Of these, 13 (40%) were at "high-risk" facilities that would cause the greatest environmental harm should a release occur. The RMP team filed 12 administrative actions: 3 Consent Agreements and Final Orders (CAFOs) and 9 Expedited Settlement Agreements (ESAs). The CAFOs had a total penalty value of \$180,662. The penalties from the ESAs had a value of \$44,820. Among the CAFOs, one respondent also agreed to conduct a Supplemental Environmental Project (SEP) valued at \$209,416, to upgrade to a wireless fire prevention system at its facility, and to provide specialized training to the Local Fire Department in foam firefighting techniques. Total value of FY18 CAA 112(r) penalties and SEPs: \$434,898.

Emergency Planning & Community Right to Know (EPCRA)

CERCLA-EPCRA non-313 provides citizens with information on chemicals used, stored, and released at facilities. CEPPS is responsible for enforcement of Section 103 of CERCLA and Sections 304, 311, and 312 of EPCRA. In FY18, CEPPS conducted 22 EPCRA 311/312 inspections and trained several new inspectors. The CERCLA-EPCRA team filed 13 administrative enforcement actions (12 CAFOs and 1 Complaint); 5 of these included SEPs. In addition, 3 informal Notices of Non-Compliance were filed. Total value of FY18 CERCLA-EPCRA penalties and SEPs: \$460,074.

Spill Prevention, Control, and Countermeasure Plans (SPCC) and Oil Enforcement

In FY18, the CEPPS-led Oil Enforcement Team coordinated 32 SPCC inspections by OSCs, CEPPS enforcement staff and multi-media inspectors in EPA's Office of Enforcement and Compliance Assurance. The team filed 7 enforcement actions under Section 311 of the Clean Water Act, involving a mix of oil spills, SPCC and FRP violations. Significantly in FY18, the Oil Enforcement Team continued to devote significant time and energy to monitoring Enbridge's fulfillment of follow-up commitments due to the company's 2010 oil spill to Michigan's Kalamazoo River – which led to a \$62 million penalty agreement in 2016. In FY18, Enbridge oversight resulted in \$1,863,000 in stipulated penalties for failure to meet certain conditions of the agreement. Total value of FY18 CWA 311 CAFOs, ESAs, Enbridge penalties and a Department of Justice Referral involving a Buckeye Pipeline spill in Northern Illinois: \$2,791,185.

Total value of FY18 CEPPS penalties and SEPs: \$3,686,157.

THE ENFORCEMENT SERVICES SECTION (ESS)

In FY18, ESS addressed 41 removal and remedial cost recovery cases for a grand total of \$32,979,102. The 41 cases included: 1 Settlement and 40 Close-outs.

- A total of \$30,340,631 was recovered from 18 site Close-outs greater than \$500,000.
- A total of \$2,638,471 was recovered from 23 cost recovery actions less than \$500,000: 1 Settlement and 22 Close-outs.
- ESS staff worked closely with their enforcement teams (ORC attorneys, OSCs, Remedial Project Managers and the Resources Management Division staff/management to ensure that all cost recovery statutes of limitations dates were met.
- In FY18, the Superfund Cost Recovery Program was identified as one of the pilot projects for the ERB's Lean Management Initiative aimed at streamlining and improving the site Close-out processes.

Process Improvements and Streamlining

- ESS staff is responsible for providing enforcement support services primarily to the ER Program, with additional support to the Remedial Program. The enforcement services include conducting investigations of potentially responsible parties (PRP), locating PRP assets, correspondence preparation, and cost recovery for both programs.
- In FY18, ESS worked on 306 active sites. ESS processed 43 new sites and 5 CERCLA Administrative Settlement Agreement and Order on Consent (ASAOC) documents. ESS also issued 102 enforcement documents (such as Information Requests, General Notice, Special Notice, and Demand Letters).

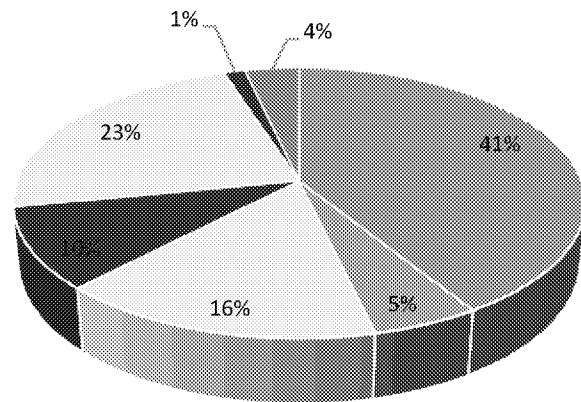
- ESS staff users conducted Lexis Nexis database searches under a fixed price contract with unlimited use for a total of \$18,312. In addition, ESS staff and other users conducted 1,060 CLEAR database searches with a sum usage amount of \$3,763.97. In FY18, the ESS exercised the option on the contract and extended the database usage throughout FY19. ESS staff issued Statements of Work for Contract Purchase Orders, reviewed monthly staff invoices, and recommended contractor payments.
- ESS staff also work closely with Superfund technical staff to support the ER Program with emergency response efforts under the Oil Pollution Act (OPA). OPA enforcement requires the quick issuance of Administrative Orders pursuant to the Clean Water Act Sections 308 & 311. One OPA Administrative Order was issued in FY18.
- ESS staff contributed support to some of the Remedial and Removal Programs' notable activities which include the enforcement coordination as part of the Chicago Pilsen and USS Lead Sites in addition to the Emergency Response Hurricane Relief effort.
- Recent staff retirements have significantly reduced the number of ESS enforcement staff. In response to limited staff resources, the ESS has actively participated in recruitment activities to include: one detail assignee; two Senior Environmental Employment Program solicitations; and efforts to hire two new Enforcement Investigators.
- In FY18, the ESS continued to implement adjustments and make improvements designed to reorganize and streamline work related processes and procedures. One example is the continued usage of the Removal Enforcement Process guidance document that delineates the ESS and ORC enforcement staff roles/responsibilities, and establishes timelines and milestones allowing for expedited PRP searches. Other examples include routine usage of the Enforcement Services Work Request Form; the Contractor Task Request Form; and the OSC Work Order Form that is used by OSCs in the field to hasten contractor enforcement support. The documents above are shared with the Remedial and Removal Programs' staff upon request.
- In FY18, all ESS letters and the Daily Correspondence Log were updated and placed on SharePoint.
- In an additional attempt to continue to provide full and timely enforcement support, ESS expanded the role of the Toeroek Associates Contractors. Throughout FY18, the ESS conducted staff meetings with the contractor to discuss enforcement processes/procedures associated with their increased enforcement support.

As depicted in the ESS Accomplishments Chart on the next page, the contractor's support added substantially to the ESS FY18 accomplishments for the following activities: PRP/Title searches; ongoing and completed Close-outs; Enforcement Addendums; ASAOs and Unilateral Administrative Orders; PRP response summaries; financial determinations; correspondence; document collections; and mailings.

Enforcement Support Section: Fiscal Year 2018 Accomplishments
Site Assignments, Cost Recovery, Contractor Support, and Database Search Activities

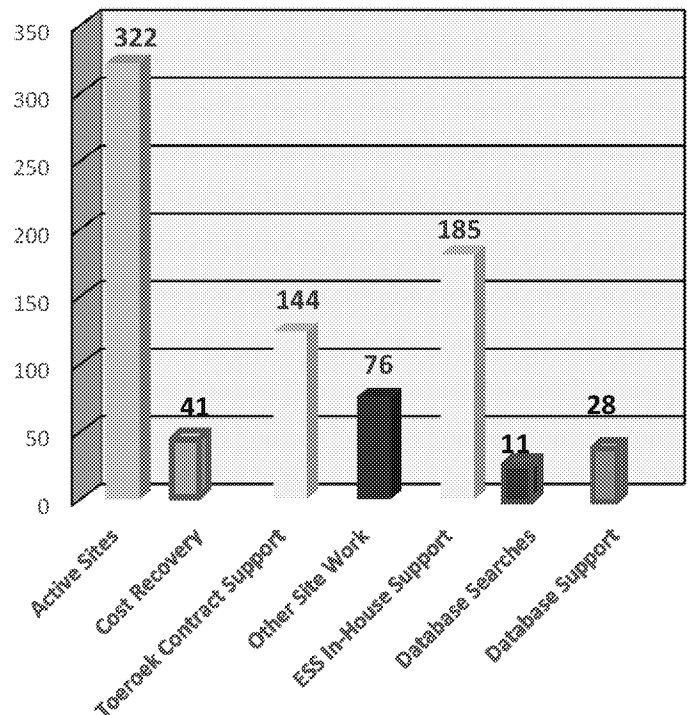
Active Sites		Activities
Previously Assigned Sites		279
Newly Assigned Sites		43
Total-Site Teams Include CIs		322
Cost Recovery Sites		Activities
Close-Outs Over 500k		18
Consent Decree Over 500k		0
Referral Over 500k		0
Close-outs Under 500k		22
Settlements		1
Total-Cost Recovery Cases		41
Toeroek Contract Support		Activities
PRP/Title Searches		41
Close-outs (ongoing/completed)		53
Financial/EAs/ASAOCs/UAOs		29
Correspondence/Mailings		14
Collections/Summary Reports		3
Property Assessments		2
PRP Response Summaries		2
Total		144
Other Site Work		Activities
Remedial Sites		6
Special Projects		3
Records Center		35
Contract QA/QC Task Orders		32
Total		76
ESS In-House Support		Activities
Correspondence		102
ASAOCs		5
Enforcement Addenda		23
OPA - Completion		1
TAs, ES & CI Access Agreements		54
Total		185
Database Searches		Users
LexisNexis Searches (2)		1
CLEAR Searches (1,060)		10
Total		11
Database Support		Activities
Database Invoice Reviews		24
Database Purchase Requests		2
All User Training		0
ET User Data Entry/Review		2
Total		28
Grand Total Activities		Actual
		807

Percentage of Site Activities



- Active Sites
- Cost Recovery
- Toeroek Contract Support
- Other Site Work
- ESS In-House Support
- Database Searches
- Database Support

ESS Activity Totals for FY2018



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SUSTAINABILITY AND GREENING REMOVAL ACTIONS INITIATIVE

The ER Program continued our sustainability efforts this year by working to reduce carbon emissions at removal sites in relation to site electricity and waste disposal. OSCs received training regarding the benefits of grid connection versus using diesel power generators where possible for on-site electricity. OSCs connected to the power grid at one third of the fund lead removal actions, and approximately 10% of the total 72,127-kilowatt (kW) hours of power used at these sites was derived from non-coal renewable sources. OSCs also utilized on site solar for power at three sites, generating 9,680 kW hours of renewable power.

The ER Program continued to implement the Superfund Greener Cleanup Strategy in FY18. OSCs are required to consider green cleanup techniques when planning removal actions, and track energy/environmental data during these clean-ups. The ER Program continued to use our data management system to collect and compile energy/recycling data for fund-lead time critical actions. In FY18, our program recycled 12,376,307 pounds of solid waste and re-used 5,910,745 pounds of material during fund lead removal projects, a significant increase from FY17.

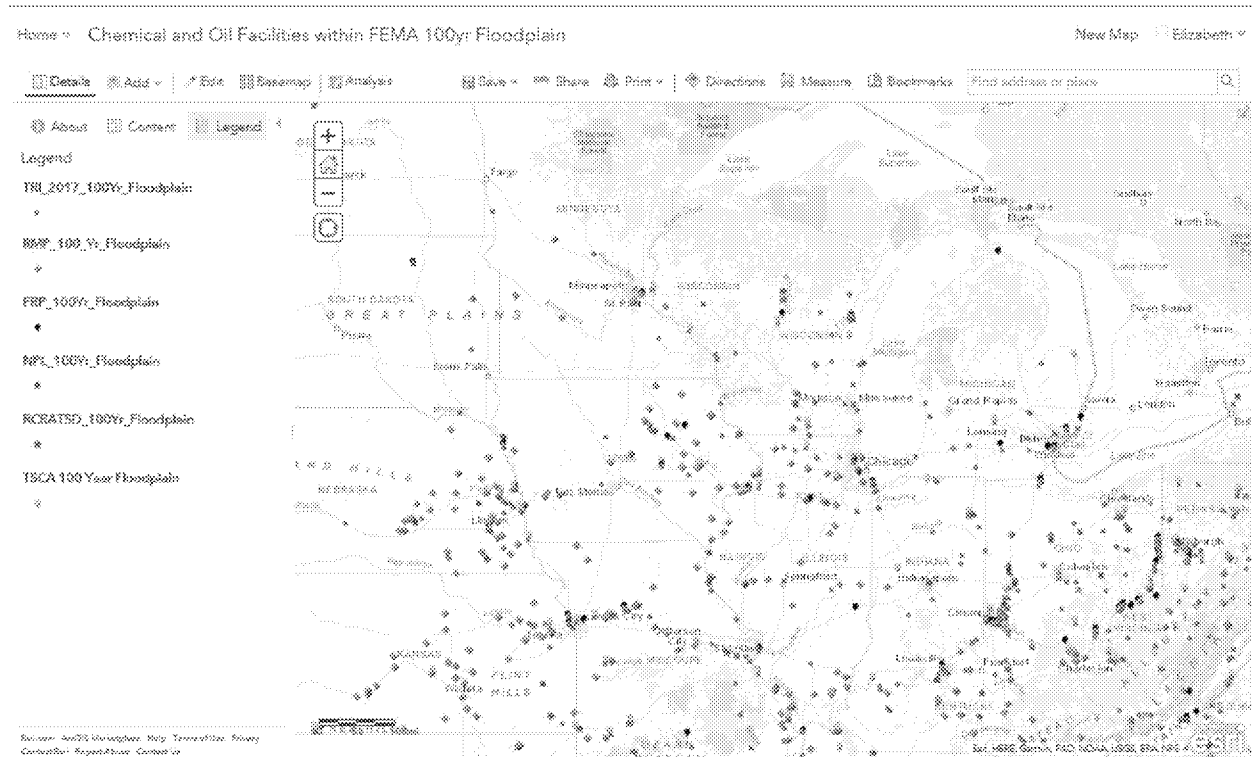
The table and figure provided below details some example green measures and savings. Green requirements have now been fully integrated into ER program contracts. All OSCs are trained annually in green cleanup techniques, and those OSCs who exemplify outstanding achievements are recognized with awards.

Metric	Total	Units	Note
Alternative/E-85 Fuel Used	1,594	gallons	
Diesel Fuel Used	50,404	gallons	
Unleaded Fuel Used	27,689	gallons	
Total Fuel Used	79,687	gallons	
Electricity from electric company	72,127	kWh	
Electricity from sources other than the electric company	9,680	kWh	On site solar
Total Electricity Used	81,807	kWh	
Solid waste recycled	12,376,307	pounds	asphalt, concrete, wood debris, scrap metal, tires, mixed materials
Solid waste reused	5,910,745	pounds	concrete, corn cob, asphalt millings, empty containers
Total waste reused and recycled	18,287,052	pounds	
Water Used	867,157	gallons	

FLOODING PREPAREDNESS

The ER Program's flooding preparedness work continued, particularly in response to an increased frequency and duration of flooding across the Region. We continued both gathering/consolidating outreach materials from EPA flood and hurricane responses. These resources were shared with other federal, tribal, state and local responders, as well as with Hurricane Irma and Maria responders. These materials, as well as numerous links to additional websites/resources, are available at [[HYPERLINK "http://epaossc.org/RCC"](http://epaossc.org/RCC)] and [[HYPERLINK "http://www.rrt5.org/Library/FloodandNaturalDisasters.aspx"](http://www.rrt5.org/Library/FloodandNaturalDisasters.aspx)]. Our 2015 analysis of facilities within 100-year floodplains was updated (see figure below), and our outreach efforts to identified facilities continued through sub-area committees and direct contact.

Figure 1. Screenshot of newly updated interactive map showing regulated facilities/sites within FEMA 100-year floodplain areas.



NOTABLE EMERGENCY RESPONSES

Superior Refinery Explosion and Fire (Superior, Wisconsin)

On the morning of April 26, 2018, Superior Refining Company was shutting down equipment for a facility turn-a-round when an explosion and fire occurred. The initial fire was quickly extinguished. A piece of shrapnel from the explosion damaged Tank 101, which contained approximately 50,000 barrels of asphalt. A second fire began in the spilled asphalt from Tank 101. The refinery staff evacuated, and the Superior Fire Department ordered a community evacuation. The evacuated area covered 3 miles to the east and west of the refinery and 10 miles to the south. The evacuation size was based on the potential for impact to a 15,000-gallon hydrofluoric acid (HF) holding tank. The fire spread to multiple process areas, and seven additional large asphalt tanks were impacted.

EPA deployed 4 OSCs, 1 ERT member, 9 contractors to the incident. EPA integrated into the local Incident Command Structure (ICS) and initially focused our resources on providing air monitoring support, assessing off-site impacts (soot and debris), and ensuring notifications to natural resource trustees, tribes, and states.

- EPA worked with the refinery and their consultant to establish a three-tiered air monitoring network and review/development of the air monitoring plan. Air monitors were deployed inside the refinery, at the fence line, and throughout the community.
- EPA requested air plume modeling analysis support from the Inter-Agency Modeling and Atmospheric Assessment Center (IMAAC).
- EPA collected air monitoring data in support of lifting the evacuation order. A web viewer was developed to manage and share data/information with other responders and stakeholders. All air monitoring data was summarized daily and provided to the Wisconsin State Health Department and the Douglas County Department of Health and made available to the public through their web-site. EPA later collected independent air samples for chemicals of concern.
- EPA worked with the refinery to address concerns related to soot deposition and fire debris that may contain suspect asbestos. EPA coordinated with federal, state and local health officials to provide information regarding these issues to the public.
- EPA collaborated with the State of Wisconsin and the Refinery and monitored a multitude of response activities including site stabilization activities; PFAS/PFOA fire-fighting water and foam collection and treatment; oiled-wildlife capture, decontamination and hazing efforts; water quality sampling in Newton Creek and Lake Superior Bay; and public outreach activities.

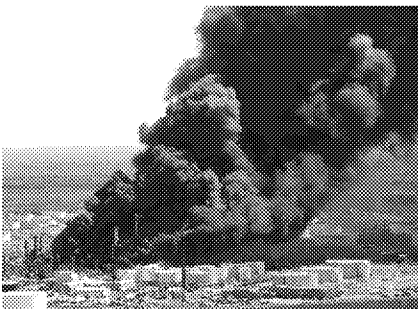


Photo: Bob King/Duluth News Tribune



Air Monitoring locations and Data Platform

Timber Lake Trail Lab ER (Madison, WI) & Beaver Dam Explosives ER (Beaver Dam, WI)

The ER Program responded to two emergency response situations involving explosive materials and illegal laboratories in Wisconsin in FY18.

In February 2018, the Wisconsin DNR (WDNR) requested EPA assistance at a multi-agency response in Madison, WI. An apartment tenant was arrested when local responders discovered hazardous materials in his unit/garage, and the entire 24-unit apartment complex was evacuated. EPA conducted the following response actions in coordination with WDNR, Federal Bureau of Investigations (FBI), Bureau of Alcohol, Tobacco and Firearms (ATF), Dane County Explosives Ordinance Disposal Team, and the fire/police/health agencies:

- Collected, identified, and disposed of 570 gallons of hazardous waste including reactives, corrosives, solvents, flammables, and toxics;
- Assisted in evidence collection; and
- Conducted air monitoring in the apartment after the hazardous materials were removed.



Garage before and after EPA removal action

In March 2018, an initial explosion in a Beaver Dam apartment resulted in the condemnation and subsequent explosion/controlled burn of an entire apartment building. WDNR requested EPA's assistance with air monitoring during the controlled burn as several additional apartment buildings were evacuated during these activities. EPA conducted the following response actions in coordination with WDNR, FBI, ATF, Dodge County Sheriff, and the local fire/police agencies:

- Conducted air monitoring in conjunction with EPA's Environmental Response Team for particulates, volatile organic compounds, hydrochloric acid, and hydrogen chloride;
- Coordinated air monitoring locations with IMAAC modeling; and
- Developed action levels for contaminants of concern in consultation with federal/state/local health officials.



during controlled burn

EPA ERT conducting air monitoring

NOTABLE SITE CLEANUPS

Otsego Township Dam Area (Otsego, Michigan)

The Otsego Township Dam Area site is part of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, a 77 mile stretch of river contaminated by paper mills which utilized recycled carbonless paper stock containing high levels of polychlorinated biphenyl (PCB). The PCBs are contained in river bottom sediments, riverbank soils, and adjacent floodplains. The primary risk driver for the cleanup is fish consumption containing PCBs. The Otsego Township Dam was at risk of failure, and high rates of bank erosion in front of the dam were causing PCBs to release into the water. These conditions pre-empted the fourth time-critical removal action on the river between Kalamazoo and Otsego, Michigan.

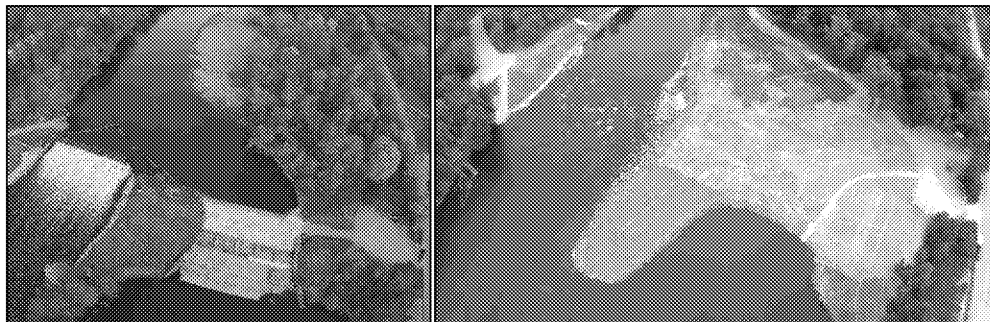
EPA issued a Unilateral Administrative Order to three potentially responsible parties to conduct a removal action involving excavation, disposal, and restoration of 1.7 miles of the Kalamazoo River upstream of the Otsego Township Dam. A pre-design sampling involved over 50 transects with soil/sediment borings across the river channel at each transect to define the limit and extent of PCB contamination to be removed.

Removal actions under EPA oversight involving PCB excavation and disposal began in August 2016 and concluded in August 2018. Fugitive dust air monitoring during the removal indicated no sustained air quality concentrations. In addition, stream turbidity monitoring ensured that strict limits placed by the State of Michigan were respected. Over 1000 threatened mussels were tagged and relocated outside of the excavation area by a specialized contractor.

All excavated areas were backfilled with imported sand, gravel, rock, soil, and native plantings for vegetative cover. Three types of stream restoration types were utilized, including one involving the placement of 'root wads' derived from downed trees in a nearby DNR-managed forest impacted by a tornado. In addition, over 18,000 'live stakes' which were cut from the branches of local willow trees were planted along the banks to secure the riverbank backfill treatments.

The following waste quantities were disposed or recycled of as part of the removal actions:

- 53,159 tons of PCB contaminated soils/sediments (non-TSCA regulated, < 50 ppm)
- 104 tons of PCB contaminated soils/sediments (TSCA regulated, > 50 ppm)
- 2,074,576 gallons of wastewater
- 61,530 pounds of scrap metal recovered and recycled



Site prior to dam removal

Site after cleanup and dam removal

Fluorescent Recycling Inc. (FRI) Site (Cleveland, Ohio)

The Fluorescent Recycling Inc. (FRI) Site is a universal waste accumulation and processing facility located in Cleveland, Ohio. FRI operated as a transporter and handler of universal waste (primarily spent fluorescent lighting) and other miscellaneous items such as E-wastes and PCB containing light ballasts.

In February 2018, a series of fire events damaged a portion of the 80,000 square-foot warehouse and prompted EPA to conduct an emergency response. Site stabilization was deemed necessary due to detections of mercury vapors in ambient air in the surrounding residential neighborhood. The emergency response transitioned to a time-critical removal action to address the on-site wastes to prevent on-going community exposure to mercury vapors and possible PCB exposure to trespassers at the site. EPA completed the disposal of all universal wastes in July 2018.

Removal steps undertaken at the site included:

- Securing the damaged building from trespassers to reduce the risk associated with arson events, and protect human health by limiting direct contact with elemental mercury;
- Collecting perimeter air samples and performing exterior site perimeter ambient air screening and interior real-time air monitoring for mercury vapor;
- Organizing and packaging damaged waste materials in preparation for transportation and disposal;
- Disposal of mercury contaminated or containing waste materials including approximately 1.2 million fluorescent tube lamps; 23 tons of mercury-containing High Intensity Discharge (HID) lamps; over 400 drums of PCB containing capacitors and lighting ballasts; and dozens of pallets of E-wastes.

The following wastes were disposed of as part of the removal action:

- 304 tons of intact fluorescent lamps (tubes) landfilled
- 108 tons of broken, crushed lamps and floor sweepings landfilled
- 38 tons of PCB-containing lighting ballasts
- 1 drum of capacitors containing high-level PCB oil
- 1 cubic yard of PCB-oil contaminated crushed drums
- 1 tritium containing radiological device



On-site fire damaged waste materials



Portion of warehouse at completion of removal